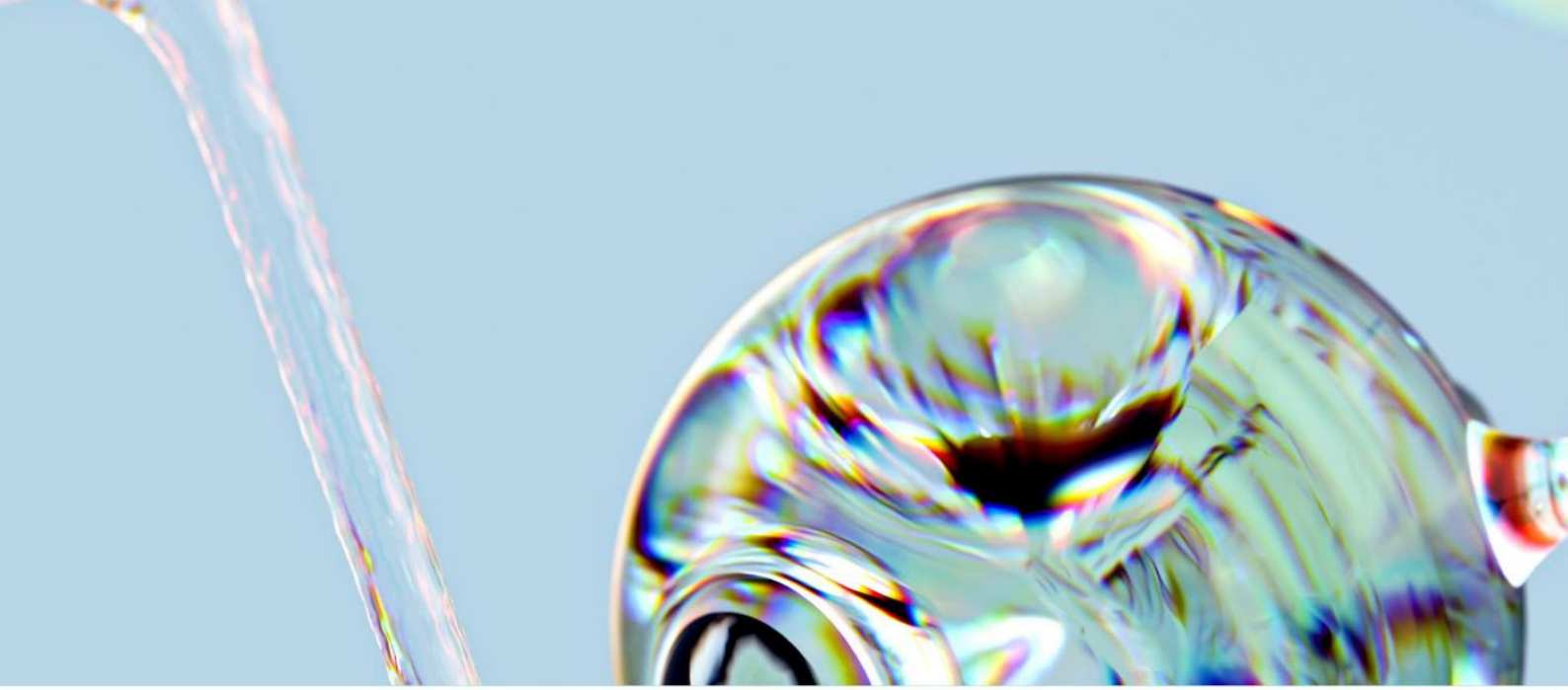
MINISTRY OF LABOUR AND SOCIAL PROTECTION

NATIONAL POLICY ON LINKING INDUSTRY TO EDUCATION, TRAINING AND RESEARCH

KENYA VISION 2030



NATIONAL POLICY ON LINKING INDUSTRY TO EDUCATION, TRAINING AND RESEARCH

© 2024 MINISTRY OF LABOUR AND SOCIAL PROTECTION
STATE DEPARTMENT FOR LABOUR AND SKILLS DEVELOPMENT
SOCIAL SECURITY HOUSE, BISHOPS RD.
P. O BOX 40326 – 00100
NAIROBI
Email: info@labour.go.ke
Website: www.labour.go.ke

TABLE OF CONTENTS

LIST OF TABLES


THE MUSCULAR SYSTEM

LIST OF ABBREVIATIONS AND ACRONYMS

ACA	Anti-Counterfeit Agency
AU	African Union
ARR	Annual Review Report
ASAL	Arid and Semi-Arid Lands
ATDC	Agricultural Technology Development Centres
BDS	Business Development Services
CAT	Credit Accumulation and Transfer
CBET	Competency Based Education and Training
CBO	Community Based Organization
CIDP	County Integrated Development Plans
CUE	Commission for University Education
CSO	Civil Society Organizations
EAC	East African Community
FDI	Foreign Direct Investments
HEI	Higher Education Institutions
IA	Implementing Agency
ICT	Information Communication Technology
ILO	International Labour Organization
IP	Intellectual Property
IPR	Intellectual Property Rights
KARLO	Kenya Agricultural Livestock and Research organization
KECOBO	Kenya Copyright Board
KEMRI	Kenya Medical Research Institute
KENIA	Kenya National Innovation Agency
KEPHIS	Kenya Plant Health Inspectorate Services
KICD	Kenya Institute of Curriculum Development
KIE	Kenya Industrial Estates
KIPI	Kenya Industrial Property Institute
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KIRDI	Kenya Industrial Research Development Institute
KLMIS	Kenya Labour Market Information System
KNQA	Kenya National Qualification Authority
KNQF	Kenya National Qualification Framework
LMI	Labour Market Information
M&E	Monitoring and Evaluation
MCDA	Ministries, Counties, Departments and Agencies
MDA	Ministries, Departments and Agencies
MSE	Micro and Small Enterprises
MSME	Micro, Small and Medium Enterprises
MSMI	Micro, Small and Medium Industries
MVP	Minimum Viable Products
NACOSTI	National Commission for Science, Technology, and Innovation

NEA	National Employment Authority
NGO	Non-Governmental Organization
NIMES	National Integrated Monitoring and Evaluation Systems
NIRL	National ICT Research Laboratory
NITA	National Industrial Training Authority
NOS	National Occupational Standards
NPMS	National Performance Management System
NRF	National Research Fund
OACPS	Organisation of African, Caribbean and Pacific States
OCS	Office of Career Services
OER	Open Educational Resources
PSC	Public Service Commission
R&D	Research and Development
R&I	Research and Innovation
RPL	Recognition of Prior Learning
SDG	Sustainable Development Goals
SDL&SD	State Department for Labour and Skills Development
ST&I	Science, Technology and Innovation
STEM	Science, Technology, Engineering and Mathematics
SVP	Skills Verification Programmes
TTO	Technology Transfer Office
TVETA	Technical Vocational Education and Training Authority
TVET	Technical Vocational Education and Training
TVET/CDACC	Technical Vocational Education and Training/Curriculum Development, Assessment and Certification Council
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
WBL	Work Based Learning
WHO	World Health Organization
WIPO	World Intellectual Property Organization

FOREWORD

The Government has developed a robust legal framework for linking industry to education, training and research. This framework comprises of the Science, Technology and Innovation Act (2013), Kenya Industrial Research and Development Institute Act (2022), Universities Act (2012), TVET Act (2013), and Industrial Training Act (2012).

Despite this progress, there are weak linkages between industry and education, training and research. This hinders industry from taking advantage of the skills, knowledge, technology and innovation produced by education and training, and research institutions, which in turn impedes their productivity, competitiveness and ability to thrive in global markets.

It is against this backdrop, that a comprehensive National Policy on Linking Industry to Education, Training and Research has been formulated. This Policy provides a framework for promoting and strengthening the linkage between industry and education, training and research towards developing a knowledge-based and globally competitive economy.

The Policy is aligned to the Kenya Vision 2030 and the Bottom-Up Economic Transformation Agenda (BETA). Furthermore, the policy is in conformity with the regional and global development agenda as espoused in the Treaty for the Establishment of the East African Community (2006), African Union Agenda 2063, 2030 Agenda for Sustainable Development and ILO Conclusions on Skills for Improved Productivity, Employment Growth and Development (2008).

We call upon all stakeholders, including Government at all levels, industry, education and training, and research institutions, development partners, civil society organizations, and the private sector to embrace this policy and work together towards ensuring that it is implemented successfully.

Hon. Florence K. Bore, EGH
Cabinet Secretary, Ministry of Labour and Social Protection

Hon. Ezekiel Machogu Ombaki, CBS
Cabinet Secretary, Ministry of Education

ACKNOWLEDGEMENTS

The State Department for Labour and Skills Development is mandated to oversee skills development among actors, and establish and manage the institutional framework for linking industry to education and training. It is in this context that the Department has formulated the National Policy on linking Industry to Education, Training and Research.

The Policy is an expression of the collective commitment of concerned stakeholders to strengthen the linkages between industry and education, training and research. It was formulated through a consultative and participatory approach which involved various stakeholders including the public sector, private sector, industry, development partners and youth groups.

I would, therefore, like to take this opportunity to thank all the stakeholders for their invaluable contributions towards the formulation of this policy. Special gratitude goes to the International Labour Organization (ILO) for providing technical and financial support towards the development of this policy.

Appreciation also goes to Dr. Wanjiru Kariuki, Secretary/Skills Development, and members of the technical committee for their commitment and tireless efforts in guiding the formulation of this policy.

Shadrack M. Mwadime, EBS
Principal Secretary, State Department for Labour and Skills Development

EXECUTIVE SUMMARY

The National Policy on linking Industry to Education, Training and Research is organized in five chapters. The first chapter provides the policy overview and context. The second chapter consists of the situational analysis. Chapter three presents the policy statements and options. The fourth chapter presents the institutional and implementation framework, and chapter five deals with the monitoring and evaluation framework of the policy.

The goal of the policy is to promote and strengthen the linkages between industry and education, training and research towards developing a knowledge-based and globally competitive economy.

The objectives of the policy framework are to:

a). Facilitate the implementation of national, regional and international commitments that promote linkages between industry and education, training and research;
b). Strengthen the management, governance and institutional framework for linking industry to education, training and research;
c). Mobilize resources to support the linking of industry to education, training and research;
d). Promote and support knowledge and technology transfer;
e). Develop a monitoring and evaluation framework for implementing linkages between industry and education, training and research.

Policy interventions that work toward the achievement of the goal and objectives have been outlined as follows:

1. The Government shall strengthen the governance and institutional framework responsible for linking industry to education, training and research.
2. The Government shall ensure that industry is represented on governing boards of education and training, and research institutions.
3. The Government shall establish and strengthen funding modalities to strengthen the linkages between industry and education, training and research.
4. The Government shall facilitate capacity development towards improving linkages between industry and education, training and research.
5. The Government shall strengthen curriculum-industry linkages towards generating demand driven knowledge and skills.
6. The Government shall strengthen work based learning intermediary mechanisms.
7. The Government shall strengthen the linkage between Micro and Small Enterprises and education, training and research to enhance their productivity.
8. The Government shall strengthen skills migration linkages to enhance knowledge and technology transfer.
9. The Government shall establish and institutionalize an efficient linkage system between industry and R&D institutions to enhance knowledge and technology transfer.
10. The Government shall ensure that research/technology parks are established and strengthened to enhance knowledge and technology transfer.
11. The Government shall ensure that innovation hubs are established and strengthened to enhance knowledge and technology transfer.

12. The Government shall ensure that creative hubs are established and strengthened to enhance knowledge and technology transfer.
13. The Government shall ensure that technology transfer offices are established and strengthened to enhance knowledge and technology transfer.
14. The Government shall promote Intellectual Property marketplaces as a mechanism for enhancing knowledge and technology transfer.
15. The Government shall promote communities of practice to enhance knowledge sharing among stakeholders in industry, education, training and research.
16. The Government shall strengthen the knowledge information management systems to enhance information sharing between industry and education and training, and research institutions.
17. The Government shall promote infrastructure sharing and collaboration between industry and education, training and research institutions.

The policy will be implemented by various actors including Ministries, Counties, Departments and Agencies (MCDAs), constitutional commissions, the private sector, industry, education, training and research institutions, development partners and civil society among other key actors. A continuous programme for monitoring and evaluation shall be developed; and the policy shall be reviewed within five years to assess its effectiveness and relevance.

1 CHAPTER ONE

POLICY OVERVIEW AND CONTEXT

1.1 INTRODUCTION

This chapter presents the problem statement, rationale, goal, objectives, principles, context, scope and formulation process of the National Policy on linking Industry to Education, Training and Research.

1.2 PROBLEM STATEMENT

Education and training, and research institutions are sources of knowledge, technology and innovation needed by industry to increase productivity, employment growth and competitiveness. The Government has, therefore, developed a progressive legal framework that promotes linkages between industry and education, training and research. Despite this effort, these linkages remain weak. Consequently, there is inadequate knowledge and technology transfer which limits the potential of industry to realise its full potential in the face of global competition. To position Kenya as a resilient knowledge-based and globally competitive economy, as envisaged in Kenya Vision 2030, there is need for a robust policy framework that addresses the weak linkage between industry and education, training and research.

1.3 RATIONALE

The following factors provide the basis for the formulation of the National Policy on linking Industry to Education, Training and Research:

a). Achievement of national, regional and international commitments

The Policy promotes linkages between industry and education, training and research as envisioned in the Kenya Vision 2030, Treaty for the Establishment of the East African Community (2006), African Union Agenda 2063, 2030 Agenda for Sustainable Development and ILO Conclusions on Skills for Improved Productivity, Employment Growth and Development (2008). The Policy also builds on the strong foundation laid by legal frameworks such as the: Science, Technology and Innovation Act (2013), which promotes linkages between universities, research institutions, and the private sector; Kenya Industrial Research and Development Institute Act (2022), which promotes the collaboration of research, higher learning and industry to advance technology, innovation and development; Universities Act (2012), which provides for university councils to enter into association, collaboration or linkages with other bodies or organizations within or outside Kenya; TVET Act (2013), which provides for collaborations between TVET institutions and industries in and outside Kenya; and the Industrial Training Act (2012), which provides for the integration of labour market information into skills development.

b). Weak linkages between industry and education and training

Despite having a legal framework that promotes linkages between industry and education and training, these linkages have been found to be weak. Sessional Paper No. 4 of 2013 on Employment Policy and Strategy for Kenya notes that that there are weak linkages between industry and education and training institutions, which has led to skills mismatches. More

recently, Sessional Paper No 1 of 2019 on Reforming Education and Training for Sustainable Development in Kenya noted that there are weak academia-industry linkages. Other frameworks, that have identified weak linkages between industry and education and training include the Third Medium Term Plan (2018-2022) and the National Education Sector Strategic Plan (2018-2022). Furthermore, the Kenya Youth Development Policy (2019) notes that the weak linkage between skills development and industry makes it difficult for the youth to transit into the labour market.

c). Weak linkages between industry and research

Although Kenya has a legal framework that promotes linkages between industry and research, various policies have indicated that these linkages are weak. Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya reports that there is a weak linkage between Micro, Small and Medium Industries (MSMIs) and research institutions. More recently, the Sessional Paper No. 5 of 2020 on promoting Micro and Small Enterprises (MSEs) for Wealth and Employment Creation points out that there is a weak linkage among research institutions, technology developers and Micro and Small Enterprises (MSEs). This has contributed to limited technology transfer and the slow pace of technological adoption among MSEs. Where research institutions have generated demand driven technologies, their commercialization has been limited due to the weak linkages between industry and research.

It is in this context that the National Policy on linking Industry to Education, Training and Research has been formulated.

1.4 GOAL, OBJECTIVES AND PRINCIPLES

1.4.1. Goal

The goal of this policy is to promote and strengthen the linkage between industry and education, training and research towards developing a knowledge-based and globally competitive economy.

1.4.2. Objectives

The objectives of this policy are to:

a). Facilitate the implementation of national, regional and international commitments that promote linkages between industry and education, training and research;
b). Strengthen the management, governance and institutional framework for linking industry to education, training and research;
c). Mobilize resources to support the linking of industry to education, training and research;
d). Promote and support knowledge and technology transfer;
e). Develop a monitoring and evaluation framework for implementing linkages between industry and education, training and research.

1.4.3. Policy guiding principles

The following guiding principles underpin this policy: -

a). Partnerships and collaborations
b). Competitiveness
c). Productivity
d). Employability
e). Participation

f). Inclusiveness
g). Sustainable development
h). Transparency
i). Accountability

1.5 POLICY AND LEGAL CONTEXT

This policy is anchored in the following legal frameworks and policies:

Constitution of Kenya - Article 10 (2) of the Constitution provides for provides for transparency and accountability which are important founding principles of collaboration frameworks.

Kenya Vision 2030 – provides for the enhancement of closer collaborations between industry and training institutions. It also provides for intensified application of technology and innovation to raise productivity and efficiency in the economy.

Bottom Up Economic Transformation Agenda (2022 – 2027) – presents the key priority areas that the Government will focus on. These include: Agriculture; Micro, Small and Medium Enterprise (MSME) economy; Housing and Settlement; Healthcare; and the Digital Superhighway and Creative Economy.

Competency Based Education and Training Policy, 2018 – presents a framework for the delivery and implementation of Competence Based Education and Training (CBET) in the TVET sector.

Kenya Youth Development Policy, 2019 – provides a framework for empowering the youth and harnessing their potential for realization of sustainable development. It outlines the priority areas aimed at improving the quality of life of the youth in Kenya.

Industrial Property Act (2012) – provides for the promotion of inventive and innovative activities, and facilitates the acquisition of technology through granting, regulation and protection of patents, utility models, technovations and industrial designs.

National Curriculum Policy, 2018 – presents a framework for guiding the curriculum reform process at all levels of education and training.

National legislation on education and training - the Universities Act (2012) provides for regulation and coordination of university education; the TVET Act (2013) provides for regulation and coordination of Technical and Vocational Education and Training (TVET); the Industrial Training Act (2012) provides for the coordination and regulation of the training of persons engaged in industry; the Basic Education Act (2013) provides for the coordination and regulation of basic education; the Kenya National Qualification Act (2014) provides for the establishment of an accreditation system on qualifications; and the Kenya National Examination Council Act (2012) provides for regulation and coordination of national examinations at basic and tertiary levels of education.

Public Finance Management Act, 2014 – regulates the financial management of national and county governments, and ensures that all revenue, expenditure, assets and liabilities of the government are managed efficiently and effectively.

Public Private Partnership Act, 2021 – provides for the participation of the private sector in the financing, construction, development, operation or maintenance of infrastructure or development projects through public private partnerships.

The Persons with Disabilities Act, 2003 - provides for the rights and rehabilitation of persons with disabilities; and to achieve equalization of opportunities for persons with disabilities.

Science, Technology and Innovation Act, 2013 - provides for the regulation of the Science, Technology and Innovation sector; development and management of the Kenya National Innovation System; and establishment of research institutions.

Sessional Paper No. 5 of 2020 on Kenya Micro and Small Enterprises Policy for Promoting Micro and Small Enterprises (MSEs) for Wealth and Employment Creation – provides an integrated enabling environment for the growth and development of productive SMEs in Kenya.

Sessional Paper No. 1 of 2019 on Reforming Education and Training for Sustainable Development in Kenya - presents the framework for delivery of inclusive, equitable, quality and relevant education, training and research that promotes life-long opportunities for all.

Treaty for the establishment of the East African Community, 2006 – provides for the participation of the private sector in the development of human resources through education and training. It further emphasizes the need for exchange of scientific information and personnel; and the promotion and publication of research and scientific findings. It also promotes industrial research and development and the transfer, acquisition, adaptation and development of modern technology.

African Union Agenda 2063 — provides a framework for technical and vocational education and training to foster greater links with industry and alignment to labour markets, with a view to improving the employability of youth and women, and closing the skills gap across the continent. It further emphasizes the need for sustained investment in new technologies and continuous innovation.

2030 Agenda for Sustainable Development — promotes the provision of relevant skills for employment, decent jobs and entrepreneurship (SDG4.4); scientific research, upgrade of the technological capabilities of industrial sectors, domestic technology development, research and innovation (SDG9.5); and cooperation and knowledge sharing in Science, Technology and Innovation (SDG 17.6).

ILO Conclusions on Skills for Improved Productivity, Employment Growth and Development (2008) — provides for collaboration between enterprises, learning and research institutions, in particular for meeting skills demands and encouraging innovation for emerging high value added sectors.

1.6 SCOPE

This policy framework will apply to all public and private education and training, and research institutions, National and County Governments and Industry.

1.7 POLICY FORMULATION PROCESS

The formulation of the National Policy on linking Industry to Education, Training and Research was undertaken through a consultative and participatory approach. The process involved various stakeholders including the public sector, private sector, industry, social partners, development partners and youth groups.

2 CHAPTER TWO

SITUATIONAL ANALYSIS

2.1 INTRODUCTION

This chapter provides a broad sectoral overview of the critical issues that impact on Kenya's progress towards linking industry to education, training and research. The situational analysis focuses on key issues that are thematically sequenced. A range of key issues have been identified in each thematic area.

2.2 GOVERNANCE AND MANAGEMENT

2.2.1. Governance

Governance sets the foundation for linking industry to education, training and research. The Government is a driving force in mediating the linkage between industry and education, training and research (see table 1). Although the Government has several intermediary institutions that are mandated to link industry to education, training and research, these linkages remain weak.

Table 1: Institutional linkages

	Intermediary institution	Mandate	Legal framework
1.	State Department for Labour and Skills Development	To manage the institutional framework for linking industry, skills development and training.	Executive Order No. 2 of 2023
2.	State Department for Shipping and Maritime Affairs	To provide human resource development, management and research in support of Kenya's shipping industry.	Executive Order No. 2 of 2023
3.	State Department for Investments Promotion	To coordinate the transformation of the eco-system supporting private sector development.	Executive Order No. 2 of 2023
4.	Kenya National Innovation Agency, Ministry of Education	To institutionalize linkages among universities, research institutions, private sector, Government, and other actors within the National Innovation System.	Science, Technology & Innovation Act (2013)
5.	Micro and Small Enterprises Authority	To facilitate technology development, acquisition and transfer by Micro And Small Enterprises in Kenya.	Micro and Small Enterprises Act (2012)
6.	National Employment Authority Act	To link the national government, private sector, informal sector, foreign governments and institutions to promote and increase access to employment.	National Employment Authority Act (2016)
7.	National Council for Persons With Disabilities	To ensure that persons with disability are linked to education and employment opportunities.	The Persons with Disabilities Act (2003)

Key issues

a). Weak linkages between industry and education, training and research;
b). Lack of synergy among intermediary institutions mandated to link industry to education, training and research;
c). Weak R&D linkages among universities, TVET and research institutions;
d). Weak monitoring, evaluation and reporting system.

2.2.2. Industry participation in governing boards

The governing structures of education, training and research institutions are councils and boards of management. Having industry participating in the governance of these institutions enhances the propensity of these institutions to collaborate with industry. The representation of industry on governing boards is embedded in various legal frameworks as illustrated in the table below.

Table 2: Industry representation on boards of management

	Institution	Board representation	Legal framework
1.	CUE	A representative of the Federation of Kenya Employers	Universities Act (2012)
2.	NACOSTI	One person nominated by the body representing the private sector	Science, Technology and Innovation Act (2013)
3.	Kenya National Innovation Agency	One person nominated by the body responsible for linking industry with higher education institutions	Science, Technology and Innovation Act (2013)
4.	TVET institutions	One person appointed with knowledge and experience in industry	TVET Act (2013)
5.	TVET/ CDACC	Three members from industry	TVET Act (2013)
6.	KNQA	One person nominated by the Kenya Federation of Employers	KNQF Act (2014)
7.	NITA	Three persons nominated by the Federation of Kenya Employers	Industrial Training Act (2012)
8.	National Education Board	One person nominated by the Kenya Private Sector Alliance	Education Act (2012)
9.	National Research Fund Kenya	One person nominated by the Kenya Private Sector Alliance	Science, Technology and Innovation Act (2013)
10.	Kenya Agricultural & Livestock Research Organization	One person with experience in agricultural research nominated by the Kenya Private Sector Alliance	Kenya Agricultural and Livestock Research Act (2013)
11.	KIPPRA	Representative of the business sector	KIPPRA Act (2012)

It is evident that industry is increasingly becoming involved in the management process through its participation in the governing boards of education and training, and research institutions. However, the Universities Act (2012) does not provide for representatives of industry on the University Councils; the TVET Act (2013) does not provide for an industry representative on the governing board of the Technical and Vocational Education and Training Authority (TVETA) which regulates TVET programmes; and the Basic Education Act (2013) does not provide for industry representation on County Education Boards and governing boards of institutions in basic education (i.e. pre-primary, primary, secondary and adult education).

Key issues

a). Industry is not represented on university councils;
b). Industry is not represented on the governing board of the Technical and Vocational Education and Training Authority (TVETA);
c). Industry is not represented on County Education Boards;
d). Industry is not represented on governing boards of institutions under basic education (pre-primary, primary, secondary and adult education).

2.2.3. Financing

Financial allocation and efficient utilization of resources is essential for stimulating linkages between industry and education, training and research. The Government has developed the Public Finance Management Act (2012) to provide for effective management of public finances. In addition, public education and training, and research institutions are provided with funding to enhance their capability to produce knowledge, technology and innovations. In addition, the National Research Fund (NRF) was established to facilitate research for the advancement of Science, Technology and Innovation (ST&I). It consists of two per cent of the country's gross domestic product, in accordance with the ST&I Act of 2013. However, the National Research Fund (NRF) is constrained by inadequate funding, limited capacity to manage the fund and weak service delivery which results in few funded research outputs.

Key issues

a). Low investment in knowledge and technology transfer;
b). Low industry investment in R&D in education and training, and research institutions;
c). Inadequate funding for the National Research Fund (NRF);
d). Financial accountability, monitoring and tracking systems need to be enhanced.

2.2.4. Capacity building

Kenya requires a well-structured capacity building strategy targeting the main players in the knowledge and technology transfer ecosystem, namely, producers, intermediaries and consumers. Hence, there is need for capacity building for the: (1) education and training institutions to supply human capital for industry; and for R&D institutions to develop cutting edge knowledge, technology and innovations and share these with industry; (2) capacity building for intermediary organizations to coordinate, network and support the industry-education/training/research linkages; and (3) capacity building for industry to adopt and utilize knowledge, technology and innovations produced by R&D institutions.

Key issues

a). Lack of a capacity building strategy for knowledge and technology transfer;
b). Inadequate capacity in education and training institutions to supply demand driven human capital for industry;
c). Inadequate capacity in R&D institutions to develop cutting edge knowledge, technology and innovations and share these with industry;
d). Inadequate capacity in intermediary organizations to coordinate, network and support the industry-education/training/research linkages;
e). Inadequate capacity of MSEs to adopt and utilize knowledge, technology and innovations produced by education and training, and research institutions.

2.3 INDUSTRY - EDUCATION AND TRAINING LINKAGES

2.3.1. Curriculum industry linkages

Employers have noted that education and training is supply driven and not well aligned to the needs of industry (Federation of Kenya Employers, 2018; Federation of Kenya Employers, 2023). Hence, various curriculum frameworks have been developed to promote the development of labour market relevant curricula. The National Curriculum Policy (2018) provides for stakeholder involvement in curriculum development. Likewise, the CBET Policy (2018) provides for an industry and business demand-led curriculum model based on industry-validated occupational standards. In addition, the TVET Act (2013) provides for the appointment of TVET trainers from practising trades persons in relevant sectors of industry. In line with the National Policy on Skills Development (2024), National Sector Skills Committees, which are industry-led bodies that cover specific sectors in Kenya, have been established to link industry to curriculum development and implementation. Currently, twelve (12) National Sector Skills Committees have been created. However, these committees are at the start-up phase.

Key issues

a). Employers require the curricula to be aligned to the needs of industry;
b). Education and training reforms are geared towards demand driven curriculum development models;
c). Emergence of National Sector Skills Committees which have the potential to effectively align curricula to the needs of industry;
d). Integration of labour market information and occupational standards in curriculum development is necessary;
e). Engagement of industry experts as part-time trainers in education and training institutions is required.

2.3.2. Work based learning linkages

The workplace is a source of knowledge and a setting for skills development. Intermediary organizations or entities play a critical role in linking employers to education and training institutions, students and graduates through the provision of work based learning opportunities. They also act as work based learning champions by ensuring community support for work based learning. In this respect, efforts have been made to establish work based learning intermediary mechanisms (see table 3).

Table 3: Work based learning intermediary mechanisms

Department	Intermediary mechanism	Purpose of the mechanism
Basic Education	-	Promote field visits.
TVET	Liaison offices; and Office of Career Services	Link TVET institutions to industry for the provision of on-the-job attachment and internships.
University education	Offices of Career Services; and Departments	Link universities to industry for the provision of work based learning.
Labour	National Employment Authority National Industrial Training Authority	Link job seekers to industry for the provision of internship and job attachments. Link students to industry for the provision of industrial attachments.
Private sector	Employers, NGOs, CBOs, Development Partners	Link out-of-school youth to industry for the provision of work based learning.

Key issues

a). Office of Career Services are required to link students and out-of-school youth to work based learning providers;
b). National Sector Skills Committees have the potential to link education and training institutions to work based learning providers;
c). Upgrading of informal apprenticeships calls for increased collaboration between education and training institutions and work based learning providers in the informal economy;
d). Industry engagement in the development of work based learning programmes is essential;
e). Building synergy among the various work based learning intermediary mechanisms is required.

2.3.3. Productivity linkages

Micro and Small Enterprises (MSEs) in Kenya comprise about 95 per cent of the number of industries and are a driving force for employment creation. However, they only contribute about 20 per cent to the manufacturing sector GDP contribution. The potential of the MSEs has not been fully realised due to challenges such as weak entrepreneurial skills, limited productivity and sustainability, and low quality products (Sessional Paper No. 5 of 2020 on promoting Micro and Small Enterprises; Sessional Paper on the National Industrialization Policy Framework for Kenya, 2012). Transfer of skills, knowledge and technology to MSEs is necessary for increased productivity.

In this regard, a number of institutions have been established to provide Business Development Services (BDS) to MSEs (see table 4).

Table 4: Productivity linkage mechanisms

Linkage mechanism	Purpose
National Productivity and Competitiveness Centre	Implements productivity improvement activities for public and private sector organizations and companies.
Micro and Small Enterprises Authority	Formulate capacity building programmes; promote research, innovation and technology among SMEs.
Kenya Institute of Business training	Provide BDS through: training, research, consultancy, counselling, extension services and business information.
Kenya Industrial Estates	Promote entrepreneurship, facilitate the graduation of MSEs to medium and large enterprises, and provide incubating services.
Youth Enterprise Development Fund; Uwezo Fund; Women Enterprise Fund	Provide entrepreneurship training and appropriate BDS for MSEs.
MSE Associations (e.g. Kenya Organisation of Micro, Small and Medium Enterprises; Kenya National Federation for Jua Kali Associations)	Foster the development of MSEs through training, adopting appropriate technology, information dissemination and marketing.

Key issues

a). Weak linkage between MSEs and education and training institutions, which offer Business Development Services;
b). Weak linkage between MSEs and Recognition of Prior Learning (RPL);
c). Weak linkage between MSEs and research institutions;
d). Linkages between MSEs and large enterprises present opportunities for skills acquisition and technology transfer;
e). Environment, Social and Governance (ESG) issues need to be incorporated in Business Development Services designed for MSEs.

2.4 SKILLS MIGRATION LINKAGES

Skills migration contributes to efficient and productive use of human capital and catalyses knowledge transfer. Through different forms of transnational practices, skilled migrants transfer knowledge, skills, technology and capital to their countries of origin. This form of knowledge transfer is exemplified in the case of Mwale Medical and Technology City in Kakamega, Kenya. This project is the brainchild of Julius Mwale, a Kenyan technology entrepreneur and investor based in the US. He assembled a team of technology and healthcare experts and companies from the US and enlisted them to develop the Mwale Medical and Technology City, which is a community-owned sustainable metropolis. To facilitate skills migration linkages, the Government has established various institutions and entities (see table below).

Table 5: Skills migration linkage mechanisms

Institution/entity	Functions related to skills migration linkages
National Inter-Agency Labour Migration Coordination Committee	Coordination of labour migration
State Department for Labour and Skills Development	Coordination of labour migration management Promote co-operation and partnerships on labour migration
State Department for Diaspora Affairs	Harness diaspora savings, facilitate Foreign Direct Investments (FDI) and technology transfers; and mainstreaming the Kenyan Diaspora into the national development process
State Department for Foreign Affairs	Management of bilateral and multilateral relations

Key issues

a). Knowledge sharing between Kenyan skilled migrants, and industry, and R&D institutions is needed;
b). An incentive framework for Kenyan skilled migrants to engage in knowledge and technology transfer is required;
c). Integration of knowledge and technology transfer in bilateral and multi-lateral labour migration agreements is required;
d). Voluntary and temporary return programmes for Kenyan skilled migrants is crucial for knowledge and technology transfer;
e). Recognition and certification of skills acquired by returnee migrants are required to enhance the portability of their skills;
f). Labour mediation services for returnee migrants are needed to facilitate their successful reintegration in the workforce.

2.5 INDUSTRY – RESEARCH AND TECHNOLOGY LINKAGES

Research and Development (R&D) plays an important role in creating knowledge that is central to the development of innovations and technologies. Transferring, utilization and commercialisation of R&D outputs and technology is dependent on collaboration and linkages. Furthermore, R&D institutions (education and training, and research institutions) require to have the ability and willingness to transfer their R&D outputs and technology; while the industries receiving these R&D outputs and technology require to have absorptive capacity, in order to reap the benefits of value addition, productivity and competitiveness (NACOSTI, 2022). The Government has, therefore, made efforts to improve R&D capabilities through the establishment of R&D institutions including universities, research institutes and technology based education and training institutions (see tables 6 and 7). Despite these efforts, technology transfer and diffusion in Kenya remains weak (KENIA, 2018).

Table 6: R&D Institutions – Universities and research institutes

Sector	No. of Institutions	Legal framework(s)
Public universities	35	Universities Act (2012)
Private universities	25	Universities Act (2012)
Agriculture	18	Kenya Agricultural and Livestock Research Act (2013)
Health	2	Kenya Medical Research Institute (Legal Notice No. 35 of 2021); Kenyatta University Teaching, Referral and Research Hospital (Legal Notice No. 4 of 2019)
Tourism	2	Tourism Research Institute (Tourism Act, No. 28 of 2011); Kenya Wildlife Research and Training Institute (TVET Act, 2013)
Industry	1	Kenya Industrial Research and Development Institute Act (2022)
Economic planning	1	Kenya Institute for Public Policy Research and Analysis (KIPPRA Act, 2012)
Water	1	Regional Centre on Ground Water Resources Education, Training and Research (Legal Notice No. 252 of 2015)
Construction	1	Kenya Building Research Centre (Executive Order No. 2 of 2023)
Security	1	National Crime Research Act (2012)
Private sector	21[1]	Science, Technology and Innovation Act (2013)

Table 7: Technology-based institutions

Technical Institutions	Legal framework
• Jomo Kenyatta University of Agriculture and Technology	JKUAT Act, 1994
• Masinde Muliro University of Science and Technology	Masinde Muliro University of Science and Technology Act (2012)
• Technical University of Kenya • Technical University of Mombasa • Dedan Kimathi University of Technology • Multi-Media University • Meru University of Science and Technology • Murang'a University of Technology • Jaramogi Oginga Odinga University of Science and Technology	Universities Act (2012)
• 12 national polytechnics • 2396 TVET institutions	TVET Act (2013)

[1] These are the research institutes registered by National Commission for Science, Technology and Innovation (NACOSTI).

Key issues

a). Weak linkages between industry and R&D institutions have a negative impact on knowledge and technology transfer;
b). The 'Buy-Kenya-Build-Kenya' preferential market access strategy calls for increased knowledge and technology transfer;
c). Collaborative research grants provide an avenue for collaborative research between R&D institutions and industry;
d). Weak alignment of R&D to industry needs;
e). Low industry involvement in developing the national research agenda;
f). Low level of R&D in TVET institutions;
g). Disadvantaged groups, including persons with disability, need to be integrated in knowledge and technology transfer interventions;
h). Weak adoption and commercialization of research results and technology by MSEs;

2.6 NETWORKING HUBS

2.6.1. Research/technology parks

A research or technology park (also known as science park, techno-park or techno-polis) is a high-tech and innovative property development that accommodates and fosters the growth of tenant firms. It is affiliated with an education and training institution, research or government body. It creates an environment that facilitates knowledge sharing, technology transfer, entrepreneurship development, market-driven innovation and investment promotion by fostering linkages between academic institutions, industry and funding partners. In Kenya, the Konza Techno-polis has been established to develop a smart city serving as a strategic area of innovation. It enlists investors to create a conducive environment for technology start-ups and enterprises to thrive and scale in partnership with other actors in the innovation ecosystem.

One of the most successful research parks, is the Stanford Research Park in the US. This is a university-affiliated research park that was established in collaboration with the City of Palo Alto. It focuses on research and development and generates income for the university and community. It is home to 150 companies including Hewlett and Packard, Varian Associates, Next Computer and Facebook. It contributes $775 million and $2.4 billion to the economies of Palo Alto city and Santa Clara county respectively. It also contributed to the emergence of Silicon Valley, which is the leading hub for high-tech innovation and development, accounting for a third of all the venture capital investment in the US. Silicon Valley is today the home to several of the world's largest technology companies including Apple, Google, HP, Intel and Oracle (Stanford Research Park, 2024; UNDP and Konza Techno-polis, 2022).

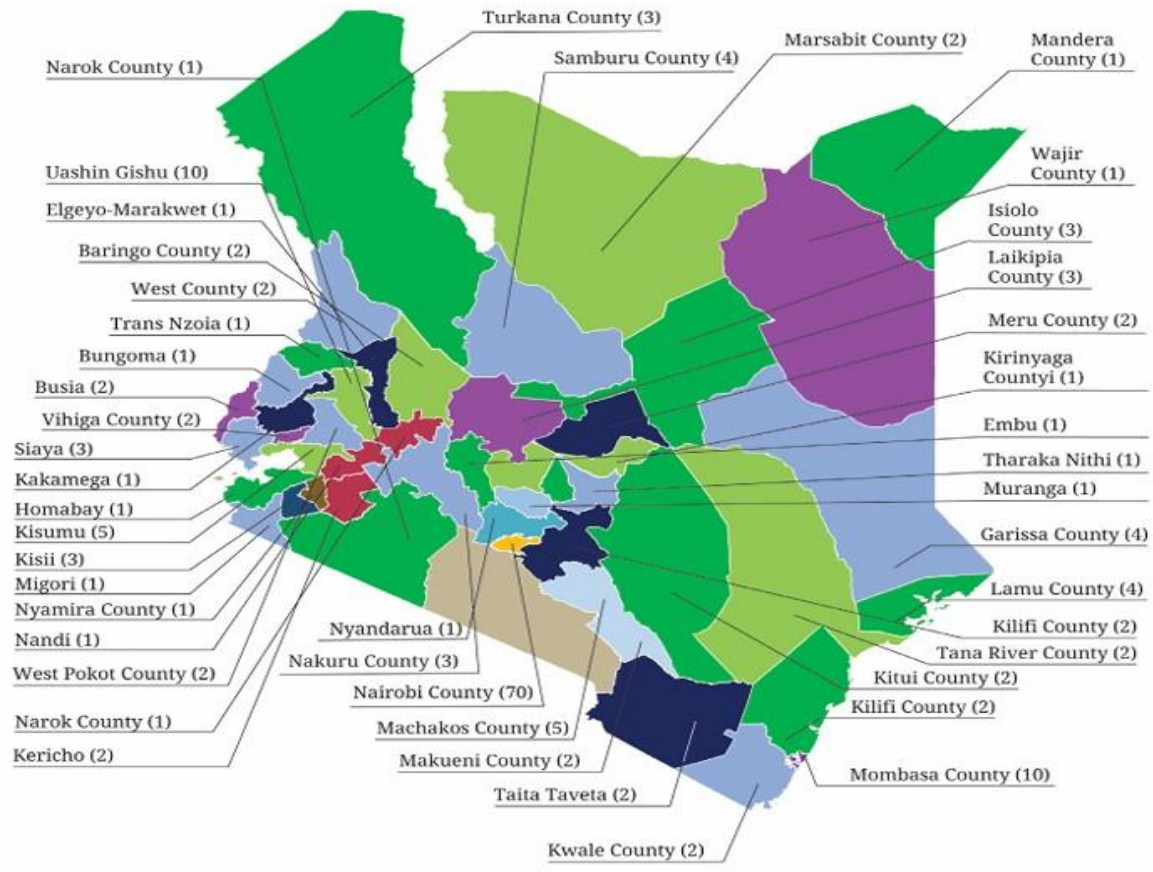
Key issues

a). Research/technology parks stimulate knowledge and technology creation and transfer;
b). Affiliation of research/technology parks to tertiary education and training, and research institutions is necessary;
c). Lack of national guidelines for research/technology parks;
d). High capital outlay is a hindrance to developing research/technology parks.

2.6.2. Innovation Hubs

Innovation hubs are made up of a system of connections that put individuals, firms, start-ups, incubators, and accelerators together to transform innovative ideas into technologically feasible solutions. Examples of innovation hubs include: accelerator hubs, digital innovation hubs, enterprise hubs, incubator hubs, R&D hubs, industry hubs, technology hubs, co-working spaces and marker spaces. Innovation hubs play an important role in generating knowledge, enhancing interactive learning, linking relevant stakeholders and facilitating knowledge and technology transfer within the innovation ecosystem. Currently, there are 281 constituency innovation hubs (Kenya National Digital Master Plan, 2022-2023). Innovation hubs have also been established in education and training, research and technology based institutions. Majority of the innovation hubs are based in Nairobi. Below is an illustration of the distribution of innovation hubs in Kenya.

Figure 1: Distribution of innovation hubs in Kenya



Source: UNDP and Konza Techno polis (2022)

Key issues

a). Innovation hubs facilitate knowledge and technology generation and transfer;
b). Innovation hubs need to be affiliated to tertiary education and training, and research institutions;
c). Insufficient collaboration between innovation hubs and MSEs;
d). Lack of national guidelines for innovation hubs;
e). Weak collaboration among innovation hubs.

2.6.3. Creative hubs

The creative economy has become an important contributor to economic growth and serves as a new prospect for diversification of economies (UNCTAD, 2021). In this respect, the Government has incorporated the creative economy as a key pillar in the Bottom Up Economic Transformation Agenda (2022 – 2027). In addition, the State Department for Youth Affairs and the Creative Economy has been mandated, under Executive Order No. 2 of 2023, to provide strategic support for the creative economy. Furthermore, Nakuru has been declared a UNESCO creative city in Kenya, for placing culture and creativity at the heart of development.

To enhance the productivity of the creative industry, there is need for creative hubs to play a crucial role in knowledge and technology transfer. These hubs provide physical or virtual spaces for creative and cultural professionals to interact, network and collaborate. In so doing, creative enterprises are able to access crucial resources such as networks, tools, specialist services and support. Examples of creative hubs include co-working spaces, studios, cluster organisations, and online networks.

Key issues

a). The creative economy which is a national development priority, calls for creative hubs to play a crucial role in enhancing knowledge and technology transfer;
b). Effective collaboration between the creative industry and creative hubs is required;
c). Affiliating creative hubs to creative-based tertiary education and training institutions is necessary;
d). Creative hubs need to be integrated in the Creative National Sector Skills Committee;
e). National guidelines for creative hubs need to be developed.

2.6.4. Technology transfer offices

The Technology Transfer Office (TTO) is an intermediary mechanism that manages Intellectual Property (IP) assets and facilitates the transfer of knowledge and technology to industry. The TTO provides industry with ground breaking technologies, technological upgrading and technology start-ups. It focuses on technology transfer activities such as licensing and patenting, spin-offs, and industry driven and sponsored research. A TTO must be economically viable in terms of results and impact. In Kenya, TTOs have been established in some R&D institutions such as KEMRI, KIRDI, KARLO, Chandaria Business Innovation and Incubation Centre at Kenyatta University, Dedan Kimathi University of Technology, Meru University and Technical University of Kenya etc.

An example of a successful TTO, outside Kenya, is the Imperial Innovations plc established by the Imperial College in the UK. It is reportedly the first TTO to have successfully floated shares on a stock market. It employs individuals with a background in venture capital, banking and management of large technology based companies. It has adopted performance based salaries which are in-line with those of the private sector rather than public sector norms. The internal culture is strongly ‘private sector’ (World Bank, 2018).

Key issues

a). Lack of national guidelines for technology transfer offices;
b). Technology transfer offices need to be established in all R&D institutions;
c). Technology transfer offices need to keep abreast with rapid changes in the IP landscape;
d). Integrating technology transfer offices in the performance management system is required.

2.6.5. Intellectual property marketplaces

The Government is obliged to support, promote and protect Intellectual Property Rights (IPR) in Articles 11, 40 and 69 of the Constitution. Furthermore, the Industrial Property Act (2001) has extensive provisions on grant and regulation of patents, utility models, industrial designs and technovations. Kenya has four intellectual property protection bodies, namely: The Kenya Industrial Property Institute (KIPI), the Kenya Copyright Board (KECOBO), Kenya Plant Health Inspectorate Services (KEPHIS) and the Anti-Counterfeit Agency (ACA). The protection of Intellectual Property (IP) is a means for economic control that rewards innovative efforts. It incentivizes innovation as it has monetary benefits. However, the Intellectual Property (IP) licensing model makes innovative products costly for Micro and Small Enterprises (MSEs) which hinders access.

Hence IP marketplaces, which are platforms that allow innovators/creators to connect with enterprises, are necessary to facilitate access to affordable IP assets. Start-ups and enterprises that are resource-constrained are able to access a wide range of IP assets (including dormant and underutilized IP assets) without high advanced costs. Legal experts within the IP marketplace provide clarity on IP law and standardised contracts which eases transactions. Furthermore, start-ups can use the IP marketplace to build networks with investors, potential partners, collaborators and mentors.

Key issues

a). Limited access to IP marketplaces;
b). Lack of regulations and guidelines for IP marketplaces;
c). Inadequate capacity to participate in IP marketplaces;
d). Lack of a quality assurance mechanism for IP marketplaces;
e). Weak linkage between MSEs and IP owners;
f). Limited networked epistemic IP communities.

2.6.6. Communities of practice

Communities of practice have the potential to play a strategic role in linking industry to education, training and research. This involves a group of stakeholders coming together to share knowledge, lessons learned and good practices. They rely on face-to-face meetings as well as web-based collaborative environments to communicate and connect with one another. A good example of a community of practice is the Kenya Network of Entrepreneurial Institution Leaders (KNEIL). It is made up of stakeholders from the universities that link up to encourage and grow their potential to develop, promote, nurture and drive sustainable innovation and entrepreneurial ecosystems. In addition, plans are underway to develop the National ICT Research Laboratory (NIRL) to maintain linkages among stakeholders in industry, academia and government (National ICT Policy, 2019).

Key issues

a). Rapid knowledge and technological changes, requiring communities of practice to foster a culture of knowledge sharing among stakeholders in industry, education, training and research;
b). Lack of national guidelines on communities of practice;
c). Emerging good practices related to communities of practice need to be adopted.

2.7 COLLABORATIONS

2.7.1. Knowledge information management systems

Information sharing is embedded in the Access to Information Act of 2016. Except for classified information (as indicated in Section 6 of the Act), this legislation requires public entities and private bodies to proactively disclose information that they hold. Information sharing acts as a catalyst for linking industry to education, training and research. ICT networks make the diffusion of knowledge efficient. In this respect knowledge information management systems have been established to facilitate information sharing (see table 8).

Table 8: Information management systems

Institution	Type of database	Existing databases
Ministry of Labour and Social Protection	Labour Market Information databases	• Kenya Labour Market Information System • National Employment Authority Integrated Management System
Ministry of Education	Education and training Management Information Systems	• National Education Management Information System • University Education Management Information System • Teacher Management Information System • TVET/Management Information System
Research based institutions	Research repositories or digital archives	• Public policy repository under the Kenya Institute for Public Policy Research and Analysis (KIPPRA) • Kenya National Research Repository under the National Research Fund • Universities research repositories • Other research bodies have repositories

Key issues

a). Low access to knowledge information management systems;
b). Limited research repositories or digital archives;
c). A dedicated open source portal for publicly funded research is needed;
d). Weak inter-linkage of knowledge information management systems;
e). Limited use of international standard indicators restricts data and information sharing and consolidation.

2.7.2. Infrastructure sharing and collaborations

Technological and R&D infrastructure comprises of basic technical infrastructure (e.g. water, energy, ICT, transport and urban structures), specialized infrastructure which supports R&D, demonstration and innovation processes (e.g. laboratories, testing and certification facilities) and existing technologies (UNCTAD, 2019).

Infrastructure sharing plays a central role in providing trainers, learners and researchers with access to highly specialized technology and equipment from industry, ensuring that they are up-to-date with current industry practices. It also reduces the cost that would result if education, training and research institutions had to purchase the specialized technology and equipment.

In addition, co-location collaborations (small firms co-located in centres of excellence) encourages collaboration and diffusion of good practices between industry and training institutions. An example is Rivatex East Africa Limited (textile factory), which is a Moi University facility for training, consultancy, research, product development and extension.

Key issues

a). Lack of guidelines for technological and R&D infrastructure sharing;
b). Lack of a coordinating mechanism for technological and R&D infrastructure sharing;
c). Limited sharing of technological and R&D infrastructure among industry, education, training and research institutions;
d). Sharing of disability inclusive technological and R&D infrastructure is essential;
e). Limited co-location collaborations between industry and education and training institutions.

3 CHAPTER THREE

POLICY PRIORITY ACTIONS

3.1. INTRODUCTION

This chapter outlines the policy priority actions of the National Policy on linking Industry to Education, Training and Research. The policy commitments are anchored on the situational analysis outlined in the previous chapter. Policy actions taken on each priority area are expected to guide initiatives required to link industry to education, training and research.

3.2. GOVERNANCE

Policy statement

The Government shall strengthen the governance and institutional framework responsible for linking industry to education, training and research.

Policy actions

a). Strengthen linkages between industry and education, training and research;
b). Create synergy among intermediary institutions mandated to link industry to education, training and research;
c). Strengthen R&D linkages among universities, TVET and research institutions;
d). Develop a mechanism for monitoring, evaluating and reporting on linkages between industry and education, training and research.

3.3. INDUSTRY PARTICIPATION IN GOVERNING BOARDS

Policy statement

The Government shall ensure that industry is represented on governing boards of education and training, and research institutions.

Policy actions

a). Ensure that industry is represented in university councils;
b). Ensure that industry is represented in the governing board of TVETA;
c). Ensure that industry is represented in County Education Boards;
d). Ensure that industry is represented in governing boards of institutions under basic education (pre-primary, primary, secondary and adult education).

3.4. FINANCING

Policy statement

The Government shall establish and strengthen funding modalities to strengthen the linkages between industry and education, training and research.

Policy actions

a). Develop a financing strategy for knowledge and technology transfer;
b). Develop an incentive framework for private sector investment in R&D in education and training, and research institutions;
c). Develop a sustainable funding strategy for the National Research Fund (NRF);
d). Strengthen financial accountability, monitoring and tracking systems.

3.5. CAPACITY DEVELOPMENT

Policy statement

The Government shall facilitate capacity development towards improving linkages between industry and education, training and research.

Policy actions

a). Develop a capacity building strategy for knowledge and technology transfer;
b). Strengthen the capacity of education and training institutions to supply demand driven human capital for industry;
c). Strengthen the capacity of R&D institutions to develop cutting edge knowledge, technology and innovations and share these with industry;
d). Enhance the capacity of intermediary organizations to coordinate, network and support the industry-education/training/research linkages;
e). Build the capacity of MSEs to adopt and utilize knowledge, technology and innovations produced by education and training, and research institutions.

3.6. CURRICULUM - INDUSTRY LINKAGES

Policy statement

The Government shall strengthen curriculum-industry linkages towards generating demand driven knowledge and skills.

Policy actions

a). Ensure that curriculum development is aligned to the needs of industry;
b). Promote the demand driven curriculum development model;
c). Facilitate operationalization of National Sector Skills Committees;
d). Ensure that labour market information and occupational standards are integrated in curriculum development;
e). Develop national guidelines on engagement of industry experts as part-time trainers in education and training institutions.

3.7. WORK BASED LEARNING LINKAGES

Policy statement

The Government shall strengthen work based learning linkages towards generating demand driven knowledge and skills.

Policy actions

a). Promote the roll out of Office of Career Services in all education and training institutions, and employment agencies;
b). Ensure that National Sector Skills Committees link education and training institutions to work based learning providers;
c). Promote linkages between education and training institutions and quality work based learning providers in the informal economy;
d). Strengthen industry engagement in the development of work based learning programmes;
e). Promote linkages among the various work based learning intermediary mechanisms.

3.8. PRODUCTIVITY LINKAGES

Policy statement

The Government shall strengthen the linkage between Micro and Small Enterprises and education, training and research to enhance their productivity.

Policy actions

a). Strengthen the linkage between MSEs and education and training institutions, which offer Business Development Services;
b). Strengthen the linkage between MSEs and Recognition of Prior Learning (RPL);
c). Strengthen the linkage between MSEs and research institutions;
d). Promote linkages between MSEs and large enterprises for skills acquisition and technology transfer;
e). Incorporate Environment, Social and Governance (ESG) issues in Business Development Services for MSEs.

3.9. SKILLS MIGRATION LINKAGES

Policy statement

The Government shall strengthen skills migration linkages to enhance knowledge and technology transfer.

Policy actions

a). Promote knowledge sharing between Kenyan skilled migrants, and industry, and R&D institutions;
b). Develop an incentive framework for Kenyan skilled migrants to engage in knowledge and technology transfer;
c). Ensure that knowledge and technology transfer is integrated in bilateral and multi-lateral labour agreements;
d). Develop voluntary and temporary return programmes for Kenyan skilled migrants to enhance knowledge and technology transfer;
e). Ensure that returnee migrants benefit from skills recognition and certification to enhance the portability of their skills;
f). Enhance labour mediation services for returnee migrants to facilitate their successful reintegration in the workforce.

3.10. RESEARCH AND TECHNOLOGY LINKAGES

Policy statement

The Government shall establish and institutionalize an efficient linkage system between industry and R&D institutions to enhance knowledge and technology transfer.

Policy actions

a). Intensify efforts to improve linkages between industry and R&D institutions;
b). Leverage on the 'Buy-Kenya-Build-Kenya' preferential market access strategy to improve knowledge and technology transfer;
c). Promote collaborative research between R&D institutions and industry;
d). Ensure that R&D institutions align their research to industry needs;

e). Enhance industry involvement in the development of the national research agenda;
f). Strengthen R&D in TVET institutions;
g). Ensure that disadvantaged groups, including persons with disability, are integrated in knowledge and technology transfer interventions;
h). Strengthen adoption and commercialization of research results and technology by MSEs.

3.11. RESEARCH/TECHNOLOGY PARKS

Policy statement

The Government shall ensure that research/technology parks are established and strengthened to enhance knowledge and technology transfer.

Policy actions

a). Promote the establishment of research/technology parks;
b). Affiliate research/technology parks to tertiary education and training, and research institutions;
c). Develop national guidelines for research/technology parks;
d). Promote public-private collaborations for establishment of research/technology parks;
e). Identify and adopt best practices related to research/technology parks.

3.12. INNOVATION HUBS

Policy statement

The Government shall ensure that innovation hubs are established and strengthened to enhance knowledge and technology transfer.

Policy actions

a). Promote the establishment of innovation hubs;
b). Affiliate innovation hubs to tertiary education and training, and research institutions;
c). Strengthen the collaboration between innovation hubs and MSEs;
d). Develop national guidelines for innovation hubs;
e). Promote collaboration among innovation hubs.

3.13. CREATIVE HUBS

Policy statement

The Government shall ensure that creative hubs are established and strengthened to enhance knowledge and technology transfer.

Policy actions

a). Promote the establishment of creative hubs;
b). Strengthen the linkages between creative hubs and creative industries;
c). Affiliate creative hubs to creative-based tertiary education and training institutions, and research institutions;
d). Integrate creative hubs to the Creative National Sector Skills Committee;
e). Develop national guidelines for creative hubs.

3.14. TECHNOLOGY TRANSFER OFFICES

Policy statement

The Government shall ensure that technology transfer offices are established and strengthened to enhance knowledge and technology transfer.

Policy actions

a). Develop national guidelines for technology transfer offices;
b). Ensure that technology transfer offices are established in all R&D institutions;
c). Strengthen the capacity of technology transfer offices to keep abreast with rapid changes in the IP landscape;
d). Integrate technology transfer offices in the performance management system.

3.15. INTELLECTUAL PROPERTY MARKETPLACES

Policy statement

The Government shall promote Intellectual Property marketplaces as a mechanism for enhancing knowledge and technology transfer.

Policy actions

a). Enhance access to IP marketplaces;
b). Develop regulations and guidelines for IP marketplaces;
c). Build capacity for effective participation in IP marketplaces;
d). Develop quality standards and a quality assurance mechanism for IP marketplaces;
e). Enhance MSEs participation in IP marketplaces;
f). Ensure that IP marketplaces create networked epistemic IP communities.

3.16. COMMUNITIES OF PRACTICE

Policy statement

The Government shall promote communities of practice to enhance knowledge sharing among stakeholders in industry, education, training and research.

Policy actions

a). Promote the establishment of communities of practice to foster a culture of knowledge sharing among stakeholders in industry, education, training and research;
b). Develop national guidelines on communities of practice;
c). Identify and adopt good practices related to communities of practice.

3.17. KNOWLEDGE INFORMATION MANAGEMENT SYSTEMS

Policy statement

The Government shall strengthen the knowledge information management systems to enhance information sharing between industry and education and training, and research institutions.

Policy actions

a). Enhance access to knowledge information management systems;
b). Ensure that all institutions conducting research establish research repositories;

c). Establish a dedicated open source portal for publicly funded research;
d). Strengthen the inter-linkage of knowledge information management systems;
e). Ensure that international standard indicators are used to enhance data and information sharing and consolidation.

3.18. INFRASTRUCTURE SHARING AND COLLABORATIONS

Policy statement

The Government shall promote infrastructure sharing and collaboration between industry and education, training and research institutions.

Policy actions

a). Develop national guidelines for technological and R&D infrastructure sharing;
b). Establish a coordinating mechanism for technological and R&D infrastructure sharing;
c). Develop an incentive framework for sharing of technological and R&D infrastructure between industry and education, training and research institutions;
d). Promote the sharing of disability inclusive technological and R&D infrastructure;
e). Promote co-location collaborations between industry and education and training institutions.

4 CHAPTER FOUR

INSTITUTIONAL AND IMPLEMENTATION FRAMEWORK

4.1 INTRODUCTION

This chapter presents the institutional and implementation framework for implementing the National Policy on linking Industry to Education, Training and Research. A multi-sectoral approach will be used in the implementation of this policy.

4.2 IMPLEMENTATION PLAN

To operationalize the National Policy on linking Industry to Education, Training and Research, a 5-year National Action Plan shall be developed. This plan shall guide the annual costed work plans of the various implementing entities. It will cover the period 2024/25 – 2028/29.

4.3 IMPLEMENTATION FRAMEWORK

This policy shall be implemented by various actors including Ministries, Counties, Departments and Agencies (MCDAs), constitutional commissions, private sector, development partners, and Civil Society Organizations (CSOs) among other key actors as indicated below:

4.3.1. **Ministry of Labour and Social Protection** - Shall spearhead the implementation of this policy.

4.3.2. **Ministry of Education** - Shall provide technical support on matters related to linking education, training and research to industry within this policy.

4.3.3. **Ministry of ICT and the Digital Economy** - Shall provide technical support on matters related to harnessing ICT to enhance the linkages between industry and education, training and research within this policy.

4.3.4. **Ministry of Agriculture and Livestock Development** - Shall provide technical support on matters related to linking the agricultural-based industry to education, training and research within this policy.

4.3.5. **Ministry of Investments, Trade and Industry** - Shall provide technical support on matters related to linking industry to education, training and research within this policy.

4.3.6. **Ministry of Mining, Blue Economy and Maritime Affairs** - Shall provide technical support on matters related to linking the mining, blue and maritime industry to education, training and research within this policy.

4.3.7. **Ministry of Co-operatives and Micro, Small and Medium Enterprises (MSME) Development** - Shall provide technical support on matters related to linking MSMEs to education, training and research within this policy.

4.3.8. **Ministry of Youth Affairs, Creative Economy and Sports** - Shall provide technical support on matters related to linking the creative industry to education, training and research within this policy.

4.3.9. Ministry of East African Community, the ASALS and Regional Development- Shall provide technical support on matters related to skills migration linkages within this policy.

4.3.10. Ministry of Foreign and Diaspora Affairs - Shall provide technical support on matters related to skills migration linkages within this policy.

4.3.11. National Treasury and Economic Planning - Shall avail adequate budgetary resources for implementation of this policy.

4.3.12. Attorney General's Office and Kenya Law Reform Commission - Shall provide technical support on all matters related to drafting and amending legislation required to implement this policy.

4.3.13. Commissions: Teachers Service Commission, Public Service Commission, Commission for University Education, National Commission for Science, Technology and Innovation - Shall provide technical support on relevant matters related to linking industry to education, training and research within this policy

4.3.14. Council of Governors - Shall provide technical support on matters related to linking industry to education, training and research within this policy, in the counties.

4.3.15. Education, training and research institutions - Shall provide technical support on matters related to linking industry to education, training and research within this policy.

4.3.16. Development partners - Shall provide technical and financial support at various levels to support the implementation of this policy.

4.3.17. Employers/industry/private sector/social partners – Shall provide technical and financial support for all aspects on linking industry to education, training and research within this policy.

4.3.18. Civil society organizations - Shall provide technical support on monitoring and evaluation of this policy.

4.3.19. Media - Shall provide support to enhance awareness about this policy.

4.3.20. Individual citizens including the youth - Shall participate in designing, monitoring and evaluation of this policy.

4.4 RESOURCE MOBILIZATION

The successful implementation of this policy will require adequate financial, human and technical resources to ensure effective and efficient implementation for desired policy outcomes.

The funding for the implementation of this Policy will be sought and prioritized by the implementing Ministries, Counties, Departments and Agencies (MCDAs) through the normal budgeting process within the available ceilings.

Other primary funding mechanisms for the policy shall include:

a). Support from the private sector, development partners, industry, civil society, philanthropic bodies, individuals and other funding agencies;
b). Public-Private sector partnerships;
c). Fundraising activities.

5 CHAPTER FIVE

MONITORING AND EVALUATION

5.1 INTRODUCTION

A Monitoring and Evaluation (M&E) framework shall be developed to ensure that the National Policy on linking Industry to Education, Training and Research is implemented effectively. This framework shall be anchored on the National Integrated Monitoring and Evaluation Systems (NIMES) and aligned to the National Performance Management System (NPMS). The objective of the framework will be to collect data, monitor the programmes against key indicators, and evaluate whether the programmes have met set objectives. There will be an Annual Review Report (ARR) on implementation of the Policy that will be presented to the relevant stakeholders.

5.2 MONITORING AND EVALUATION

Policy statement:

The Government shall establish a national monitoring and evaluation framework to ensure that the policy interventions are monitored and evaluated.

Policy actions

a). Develop a national monitoring and evaluation framework;
b). Develop a risk management framework;
c). Develop a budget for monitoring and evaluation;
d). Build capacity to undertake monitoring and evaluation;
e). Conduct rapid assessments, mid-term and end-term evaluations.

5.3 POLICY REVIEW

This Policy shall be reviewed within five years to assess its impact, effectiveness and relevance.

BIBLIOGRAPHY

CUE (2011) *Standards and Guidelines for University Academic Programmes*. Nairobi: CUE

ILO (2008) ILO Conclusions on Skills for Improved Productivity, Employment Growth and Development, *International Labour Conference*. Geneva: ILO

OACPS (2023) *Guidelines for Cooperation and Management of Innovation Hubs in Kenya.* Brussels: Organisation of African, Caribbean and Pacific States (OACPS) Secretariat

OECD (2004) *Career Guidance: A Handbook for Policy Makers*. Paris: OECD

KENIA (2018) *KENIA Strategic Plan 2018 – 2022.* Nairobi: KENIA

KENIA (2021) *Kenya 10-year Innovation Masterplan.* Nairobi: KENIA

International Organization for Migration (2020) *International Migration from Kenya (2016-2020).* Geneva: International Organization for Migration

NACOSTI (2022) Report on Kenya's Participation in the Commission on Science and Technology for Development Inter-Sessional Panel Meeting held in Geneva, Switzerland from 25th to 26th October 2022. Nairobi: NACOSTI

Republic of Kenya (2007) *Labour Institutions Act.* Nairobi: Government Printer

Republic of Kenya (2007) *The Persons with Disabilities Act.* Nairobi: Government Printer

Republic of Kenya (2009) *National Policy on Culture and Heritage.* Nairobi: Government Printer

Republic of Kenya (2012) *Education Act*. Nairobi: Government Printer

Republic of Kenya (2012) *Industrial Training Act*. Nairobi: Government Printer

Republic of Kenya (2012) *KIPPRA Act*. Nairobi: Government Printer

Republic of Kenya (2012) *Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya, 2012 – 2030*. Nairobi: Government Printer

Republic of Kenya (2012) *Universities Act.* Nairobi: Government Printer

Republic of Kenya (2013) *Basic Education Act.* Nairobi: Government Printer

Republic of Kenya (2013) *Kenya Agricultural and Livestock Research Act.* Nairobi: Government Printer

Republic of Kenya (2013) *Science, Technology and Innovation Act.* Nairobi: Government Printer

Republic of Kenya (2013) *Sessional Paper No. 4 of 2013 on Employment Policy and Strategy for Kenya.* Nairobi: Government Printer

Republic of Kenya (2013) *TVET Act.* Nairobi: Government Printer

Republic of Kenya (2014) *Kenya National Qualifications Act*. Nairobi: Government Printer

Republic of Kenya (2016) *Access to Information Act.* Nairobi: Government Printer

Republic of Kenya (2016) *Internship Policy and Guidelines for the Public Service.* Nairobi: Government Printer

Republic of Kenya (2016) *Micro and Small Enterprise Authority Act.* Nairobi: Government Printer

Republic of Kenya (2016) *National Employment Authority Act.* Nairobi: Government Printer

Republic of Kenya (2018) *Competence Based Education and Training Policy.* Nairobi: Government Printer

Republic of Kenya (2018) *National Curriculum Policy.* Nairobi: Government Printer

Republic of Kenya (2018) *National Education Sector Strategic Plan 2018- 2022*. Nairobi: Government Printer

Republic of Kenya (2018) *Third Medium Term Plan, 2018-2022.* Nairobi: Government Printer

Republic of Kenya (2019 *Basic Education Curriculum Framework.* Nairobi: Government Printer

Republic of Kenya (2019) *National Information, Communications and Technology Policy.* Nairobi: Government Printer

Republic of Kenya (2019) *Sessional Paper No. 1 of 2019 on Reforming Education and Training for Sustainable Development in Kenya.* Nairobi: Government Printer

Republic of Kenya (2020) *Sessional Paper No. 5 of 2020 on Kenya Micro and Small Enterprises Policy for Promoting Micro and Small Enterprises (MSEs) for Wealth and Employment Creation.* Nairobi: Government Printer

Republic of Kenya (2021) *National Agricultural Research System Policy.* Nairobi: Government Printer

Republic of Kenya (2022) *Bottom Up Economic Transformation Agenda, 2022 – 2027*. Nairobi: Government Printer

Republic of Kenya (2022) *National Digital Master Plan, 2022-2023.* Nairobi: Government Printer

Republic of Kenya (2023) *Executive Order No. 2 of 2023: Organization of The Government of the Republic of Kenya.* Nairobi: Government Printer

Stanford Research Park (2024) Stanford Research Park. Accessed at: https://stanfordresearchpark.com/about/

UNCTAD (2019) *A Framework for Science, Technology and Innovation Policy Reviews.* Geneva: UNCTAD

UNCTAD (2021) *Bridgetown Covenant.* Geneva: UNCTAD

UNDP and Konza Techno polis (2022) *Mapping the Innovation Ecosystem in Kenya.* Nairobi: UNDP

UNIDO (2021) *International Guidelines for Industrial Parks.* Vienna: UNIDO

WIPO (2023) *Technology Transfer.* Geneva: WIPO

World Bank (2018) *Technology Transfer from Public Research Organizations.* Washington D. C: World Bank

APPENDICES

Appendix 1: Definition of terms

Capacity building	Refers to the process by which people or institutions are taught capacity—the knowledge of how to deploy a capability effectively.
Community of practice	Refers to a group of people, who engage on an ongoing basis, to facilitate deliberations and mutual learning on a common concern, a set of problems, or an interest in a topic.
Creative economy	Refers to those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property.
Creative hub	Refers to a place, either physical or virtual, which brings creative people together. It is a convenor, providing space and support for networking, business development and community engagement within the creative, cultural and tech sectors.
Data	Refers to facts and statistics collected together for reference or analysis.
Digital platform	Refers to an integrated set of core technologies that support the composition, management, delivery and optimization of contextualized digital experiences.
Industry	Refers to a productive enterprise or organization that produces or supplies goods, services, or sources of income. It includes all aspects of the productive sector.
Innovation	Refers to a new or significantly improved product (good or service), process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.
Innovation hubs	Refers to intermediary service providers that support and nurture new business start-ups through different developmental stages.
Intellectual property	Refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce for which proprietary rights may be obtained or enforced by law.
Intellectual property marketplace	Refers to a platform that allows innovators/creators to connect with enterprises.
Knowledge	Refers to information, understanding, skills, values and attitudes acquired through learning.
Knowledge /technology park	Refers to a high-tech and innovative property development that accommodates and fosters the growth of tenant firms and is affiliated with an education and training institution, research or government body.
Knowledge transfer	Refers to a process through which one group transfers knowledge (information, understanding, skills, values, and attitudes acquired through learning) to another.
Labour force	Refers to all persons of working age who furnish the supply of labour for the production of goods and services during a specified time-

	reference period. It is the sum of all persons of working age who are employed and those who are unemployed.
Labour market	Refers to the system of relationships between the supply of people available for employment and the available jobs.
Labour mobility	Refers to temporary or short-term movements of persons for employment-related purposes, particularly in the context of the free movement of workers in regional economic communities.
Micro enterprise	Refers to a business activity whose annual turnover is below KShs. 1 million.
National innovation system	This is an open, evolving and complex system that encompasses relationships within and between organizations, institutions and socio-economic structures which determine the rate and direction of innovation and competence building emanating from processes of science-based and experience-based learning.
Patent	This is an exclusive right granted for an invention, which provides the inventor with the exclusive right to prevent others from possessing, using, selling, manufacturing and importing the patented invention or offering to do any of these things within a definite geographical area.
Productivity	Refers to the ratio between output and input. It is the efficient and effective utilization of resources in production of high quality and cost effective goods and services in an environmentally sustainable manner.
Research and development	Refers to activities that institutions undertake to innovate and introduce new products and services.
Small enterprise	Refers to a business activity whose annual turnover ranges between Kshs. 1 million and KShs. 5 million and employs between 10-50 people.
Spinoff	A company established based on research outputs from an institution of higher learning or research organization by the people working in the institution.
Start-up	An innovative business entity, which is scalable by design, created based on innovations developed to solve a clearly identified challenge in society.
Start-up accelerator	An organization that offers mentorship, capital, and connections to investors and business partners. It is designed for select start-ups with promising Minimum Viable Products (MVPs) that have potential to rapidly scale.
Technology transfer	Refers to a collaborative process that allows scientific findings, knowledge and intellectual property to flow from creators, such as universities and research institutions, to public and private users.
Technology transfer office	Refers to an intermediary mechanism that manages IP assets and facilitates the transfer of knowledge and technology to industry.
Work based learning	Refers to opportunities provided to achieve employment-related competencies in the workplace.

Appendix 2: Policy coordination action plan

	Component	Activity	Indicator	Responsible	Timeline				
					2024/25	2025/26	2026/27	2027/28	2028/29
1.	Public awareness of the National Policy on linking Industry to Education, Training and Research	Undertake public education and sensitization of the Policy	Capacity Building Report	SDL&SD	√				
2.	Action Plan and M&E Framework of the National Policy on linking Industry to Education, Training and Research	Develop the Action Plan for implementing the Policy	Action Plan	SDL&SD	√	√			
		Develop the M&E Framework of the Policy	M&E framework	SDL&SD	√	√			
		Undertake monitoring and evaluation of policy implementation	Quarterly & annual progress M&E reports	SDL&SD	√	√	√	√	√
3.	Review the National Policy on linking Industry to Education, Training and Research and Action Plan and M&E framework	Review the Policy	Reviewed policy	SDL&SD					√
		Review the Policy Action Plan	Reviewed Action Plan	SDL&SD					√
		Review the M&E framework of the Policy	Reviewed M&E framework	SDL&SD					√

National Policy on Linking Industry to Education, Training and Research

STATE DEPARTMENT FOR LABOUR AND SKILLS DEVELOPMENT
SOCIAL SECURITY HOUSE, BISHOPS RD.
P.O BOX 40326 – 00100 NAIROBI
Email: info@labour.go.ke
Website: www.labour.go.ke